

Appendix X – Micro-trenching Guidelines

Micro-trenches

The micro trenches shall meet the following conditions:

- a) The maximum width of the grooves—micro trenches—shall not exceed 25 mm in both longitudinal and transverse directions according to OPSS 369 – *Construction Specification for Sealing or Resealing of Joints and Cracks in Concrete Pavement and Concrete Base*.
- b) The depth of the grooves shall not exceed the depth of the asphalt layer in composite pavements, meaning the the grooves must not penetrate the concrete base to any extent.
- c) The ducts must be placed at least 55 mm below the surface of the pavement. The top of the upper most duct must be 55 mm or more below the pavement surface or extend beyond the asphalt layer for flexible pavements.
- d) The asphalt depth is as found in the field survey, the trench depth must be adjusted accordingly.
- e) No micro-trenching will be permitted on special pavements such as, decorative paving such as bricks, concrete pavers, exposed concrete, and so on.
- f) Upon completion of micro-trenching, lane markings and pedestrian walks shall be reinstated.

Micro-trenching Repair

Micro-trenching repair works shall be according to OPSS 369 – *Construction Specification for Sealing or Resealing of Joints and Cracks in Concrete Pavement and Concrete Base*.

Cut Filler

The micro-trench reinstatements require products that are

- free flowing to the bottom of the trench
- self compacting
- simple and safe to use
- obtains a high bond strength
- stable under traffic load
- suitable for the road environment
- free of hazardous materials as defined in the City standards.

Surfaced Roads

The micro trenching company (Owner) has to propose a strategy for the re-instatement of cables when the City needs to grind and pave or reconstruct the road. City policy does not allow for trenching or tampering with newly surface roads under moratorium as defined in the City's Municipal Consent Requirements.

Prior to undertaking any work, the Owner must undertake and provide the City with a report identifying the alignment and thickness of pavement materials being impacted. The thickness of pavement shall be determined using non-destructive pavement investigation techniques such as Ground Penetrating Radar (GPR) along the proposed alignment and connection locations. This will ensure the owner is in conformance with requirements detailed in paragraph 1, above.

The Owner must identify requirements/locations of conflict with other micro-trenches and traffic loops, and how these will be addressed to ensure damage does not occur to existing installations. City's TPIM will review and estimate costs of interruptions to the traffic loops and a letter of credit covering the costs of the estimated damage needs to be deposited with the City to allow it to choose its own contractor to do the repairs.

The Owner cannot leave the work site until the trenches are safely filled or properly covered to ensure public safety. Failure to comply with such condition may result in fines which would be additional costs to the utility Owner.

The Owner must report immediately to the City's permitting office staff any field problems related to other utilities that they encounter during the work.

Given this is a new installation method, the City has no performance data to assess the extent of pavement degradation nor the requirements for mill and pave. However, the City reserves the right to impose pavement degradation fees under Municipal Code Chapter 441 in the event of damage.